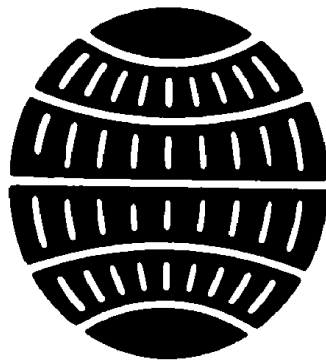


CHAPTER 29



ELECTRICIAN'S MATE (EM)

NAVPERS 18068-29E

CH-42

ELECTRICIAN'S MATE (EM) TABLE OF CONTENTS

SCOPE OF RATING	EM-3
GENERAL INFORMATION	EM-4
ELECTRICAL SYSTEMS MAINTAINER	EM-5
AUXILIARY ELECTRICAL EQUIPMENT	EM-5
ELECTRICAL INSTALLATIONS	EM-7
ELEVATORS AND CONVEYORS	EM-7
LIFTING EQUIPMENT	EM-7
LIGHTING SYSTEMS	EM-7
MOTORS AND GENERATORS	EM-8
POWER DISTRIBUTION	EM-8
SMALL CRAFT	EM-9
TECHNICAL ADMINISTRATION	EM-9
ELECTRICAL SYSTEMS TECHNICIAN	EM-10
AUXILIARY ELECTRICAL EQUIPMENT	EM-10
ELECTRICAL INSTALLATIONS	EM-12
ELEVATORS AND CONVEYORS	EM-12
LIFTING EQUIPMENT	EM-12
LIGHTING SYSTEMS	EM-13
MOTORS AND GENERATORS	EM-13
POWER DISTRIBUTION	EM-14
SMALL CRAFT	EM-14
TECHNICAL ADMINISTRATION	EM-14

NAVY ENLISTED OCCUPATIONAL STANDARDS

FOR

ELECTRICIAN'S MATE (EM)



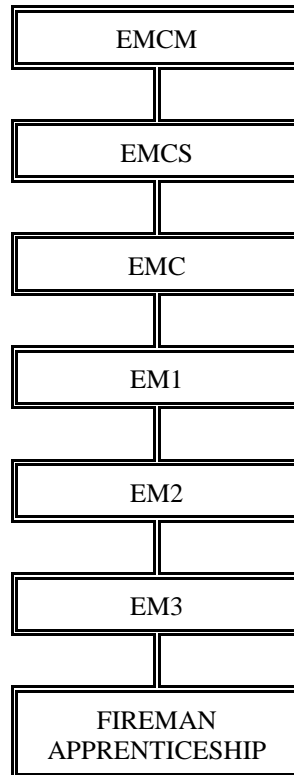
SCOPE OF RATING

Electrician's Mates (EM) stand watch on generators, switchboards, control equipment, and electrical equipment; operate and perform organizational and intermediate maintenance on power and lighting circuits, electrical fixtures, motors, generators, voltage and frequency regulators, controllers, distribution switchboards and other electrical equipment; test for short circuits and grounds; and rebuild electrical equipment, including solid state circuitry elements.

These Occupational Standards are to be incorporated in Volume I, Part B, of the Manual of Navy Enlisted Manpower and Personnel Classifications and Occupational Standards (NAVPERS 18068F) as Chapter 29.

GENERAL INFORMATION

CAREER PATTERN



Normal path of advancement to Chief Warrant Officer and Limited Duty Officer categories can be found in OPNAVINST 1420.1.

For rating entry requirements, refer to MILPERSMAN 1306-618.

SAFETY

The observance of proper safety precautions in all areas is an integral part of each billet and the responsibility of every Sailor; therefore, it is a universal requirement for all ratings.

Job Title**Electrical Systems Maintainer****Job Code****003699****Job Family**

Installation, Maintenance, and Repair

NOC

4900-2094.00

Short Title (30 Characters)

ELECTRICAL SYSTEMS MAINTAINER

Short Title (10 Characters)

ESYS MAINT

Pay Plan

Enlisted

Career Field

EM

Proficiency Level

A

Other Relationships and Rules:

Not applicable, based upon the NEC assigned to the job (if any).

Job Description

Electrical Systems Maintainers are responsible for the installation, operation, adjustment, routine maintenance, inspection, testing and repair of a ship's electrical power generation systems, lighting systems, electrical equipment, electrical appliances, and interpreting the electrical sketches, diagrams, and blueprints associated with those systems. They maintain operating efficiency of distribution panels, switches, switchboards, controllers, voltage regulators, current transformers, voltage transformers, and electric motors. They inspect, maintain, test, and repair electrical power equipment and related electronic equipment, install and maintain storage batteries, install power and lighting circuits, connect electric power machinery and electric power equipment, repair distribution circuits, and run wiring for lights and other equipment. They perform maintenance and repair of electrical equipment and appliances, shipboard elevator systems, and various propulsion and auxiliary control consoles, test for short circuits and grounds, and rebuild electrical equipment. These maintainers work under the supervision of a mentor while learning a trade or skill.

DoD Relationship**Title and Group:**

Electric Power

166

Code and Area:

166200

16

O*NET Relationship**Title and SOC Code:**

Electrical and Electronics Repairers,
Commercial and Industrial Equipment
49-2094.00

Name and Family Code:

Installation, Maintenance, and
Repair
49

AUXILIARY ELECTRICAL EQUIPMENT**Paygrade**

E4

Task Type

CORE

Task Statements

Maintain air compressor electrical components

*Operation and Control**Systems Evaluation***Abilities***Manual Dexterity**Finger Dexterity*

E4

CORE

Maintain air conditioning system electrical components

*Operation and Control**Systems Evaluation**Manual Dexterity**Finger Dexterity*

E5

CORE

Maintain alarm system components

*Operation and Control**Systems Evaluation**Manual Dexterity**Finger Dexterity*

E4

CORE

Maintain battery support systems

*Operation and Control**Systems Evaluation**Manual Dexterity**Finger Dexterity*

E4

CORE

Maintain boiler electrical components

*Operation and Control**Systems Evaluation**Manual Dexterity**Finger Dexterity*

E4

CORE

Maintain cathodic protection system components

*Operation and Control**Systems Evaluation**Manual Dexterity**Finger Dexterity*

E4

CORE

Maintain chilled water system components

*Operation and Control**Systems Evaluation**Manual Dexterity**Finger Dexterity*

E4

CORE

Maintain Collection, Holding, and Transfer (CHT) system electrical components

*Operation and Control**Systems Evaluation**Manual Dexterity**Finger Dexterity*

E4

CORE

Maintain degaussing system components

*Operation and Control**Systems Evaluation**Manual Dexterity**Finger Dexterity*

E4

CORE

Maintain dehydrator electrical components

*Operation and Control**Systems Evaluation**Manual Dexterity**Finger Dexterity*

E4	CORE	Maintain electrically-operated valve components	<i>Operation and Control</i>	<i>Manual Dexterity</i>
			<i>Systems Evaluation</i>	<i>Finger Dexterity</i>
E4	CORE	Maintain galley equipment electrical components	<i>Operation and Control</i>	<i>Manual Dexterity</i>
			<i>Systems Evaluation</i>	<i>Finger Dexterity</i>
E4	CORE	Maintain laundry equipment electrical components	<i>Operation and Control</i>	<i>Manual Dexterity</i>
			<i>Systems Evaluation</i>	<i>Finger Dexterity</i>
E4	CORE	Maintain mess deck equipment electrical components	<i>Operation and Control</i>	<i>Manual Dexterity</i>
			<i>Systems Evaluation</i>	<i>Finger Dexterity</i>
E4	CORE	Maintain precipitator components	<i>Operation and Control</i>	<i>Manual Dexterity</i>
			<i>Systems Evaluation</i>	<i>Finger Dexterity</i>
E4	CORE	Maintain Programmable Logic Controllers (PLC)	<i>Operation and Control</i>	<i>Manual Dexterity</i>
			<i>Systems Evaluation</i>	<i>Finger Dexterity</i>
E4	CORE	Maintain refrigeration system electrical components	<i>Operation and Control</i>	<i>Manual Dexterity</i>
			<i>Systems Evaluation</i>	<i>Finger Dexterity</i>
E4	CORE	Maintain salinity indicating system components	<i>Operation and Control</i>	<i>Manual Dexterity</i>
			<i>Systems Evaluation</i>	<i>Finger Dexterity</i>
E4	CORE	Maintain scullery equipment electrical components	<i>Operation and Control</i>	<i>Manual Dexterity</i>
			<i>Systems Evaluation</i>	<i>Finger Dexterity</i>
E4	CORE	Maintain sensing and control electrical devices	<i>Operation and Control</i>	<i>Manual Dexterity</i>
			<i>Systems Evaluation</i>	<i>Finger Dexterity</i>
E5	CORE	Maintain shaft speed sensing, indication, and Engine Order Telegraph (EOT) components	<i>Operation and Control</i>	<i>Manual Dexterity</i>
			<i>Systems Evaluation</i>	<i>Finger Dexterity</i>
E4	CORE	Maintain ships heating system electrical components	<i>Operation and Control</i>	<i>Manual Dexterity</i>
			<i>Systems Evaluation</i>	<i>Finger Dexterity</i>
E4	CORE	Maintain steering control system electrical components	<i>Operation and Control</i>	<i>Manual Dexterity</i>
			<i>Systems Evaluation</i>	<i>Finger Dexterity</i>
E5	CORE	Maintain ultrasonic cleaner components	<i>Operation and Control</i>	<i>Manual Dexterity</i>
			<i>Systems Evaluation</i>	<i>Finger Dexterity</i>
E4	CORE	Maintain ventilation system electrical components	<i>Operation and Control</i>	<i>Manual Dexterity</i>
			<i>Systems Evaluation</i>	<i>Finger Dexterity</i>
E4	CORE	Maintain welding equipment electrical components	<i>Operation and Control</i>	<i>Manual Dexterity</i>
			<i>Systems Evaluation</i>	<i>Finger Dexterity</i>
E4	CORE	Repair ships heating system electrical components	<i>Management of Material Resources</i>	<i>Multi-limb Coordination</i>
			<i>Repairing</i>	<i>Manual Dexterity</i>
E4	CORE	Test storage batteries	<i>Operation Monitoring</i>	<i>Extent Flexibility</i>
			<i>Quality Control Analysis</i>	<i>Multi-limb Coordination</i>
E4	CORE	Troubleshoot ships heating system electrical components	<i>Systems Evaluation</i>	<i>Multi-limb Coordination</i>
			<i>Troubleshooting</i>	<i>Inductive Reasoning</i>

ELECTRICAL INSTALLATIONS

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>	<u>Skills</u>	<u>Abilities</u>
E5	CORE	Interpret working drawings	Complex Problem Solving Critical Thinking	Written Expression Written Comprehension

ELEVATORS AND CONVEYORS

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>	<u>Skills</u>	<u>Abilities</u>
E4	CORE	Maintain conveyor electrical components	Operation and Control Systems Evaluation	Manual Dexterity Finger Dexterity
E4	CORE	Maintain elevator and dumbwaiter electrical components	Operation and Control Systems Evaluation	Manual Dexterity Finger Dexterity
E4	CORE	Repair conveyor electrical components	Management of Material Resources Repairing	Multi-limb Coordination Manual Dexterity
E4	CORE	Repair elevator and dumbwaiter electrical components	Management of Material Resources Repairing	Multi-limb Coordination Manual Dexterity

LIFTING EQUIPMENT

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>	<u>Skills</u>	<u>Abilities</u>
E4	CORE	Maintain capstan electrical components	Operation and Control Systems Evaluation	Manual Dexterity Finger Dexterity
E4	CORE	Maintain crane electrical components	Operation and Control Systems Evaluation	Manual Dexterity Finger Dexterity
E4	CORE	Maintain electrical hoist electrical components	Operation and Control Systems Evaluation	Manual Dexterity Finger Dexterity
E4	CORE	Maintain electrical winch components	Operation and Control Systems Evaluation	Manual Dexterity Finger Dexterity
E4	CORE	Maintain windlass electrical components	Operation and Control Systems Evaluation	Manual Dexterity Finger Dexterity

LIGHTING SYSTEMS

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>	<u>Skills</u>	<u>Abilities</u>
E4	CORE	Maintain flight deck lighting system components	Operation and Control Systems Evaluation	Manual Dexterity Finger Dexterity
E4	CORE	Maintain general lighting system components	Operation and Control Systems Evaluation	Manual Dexterity Finger Dexterity
E4	CORE	Maintain navigation and signal lighting system components	Operation and Control Systems Evaluation	Manual Dexterity Finger Dexterity

MOTORS AND GENERATORS

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>	<u>Skills</u>	<u>Abilities</u>
E4	CORE	Maintain Alternating Current (AC) motor electrical components	<i>Operation and Control</i> <i>Systems Evaluation</i>	<i>Manual Dexterity</i> <i>Finger Dexterity</i>
E4	CORE	Maintain Direct Current (DC) generator components	<i>Operation and Control</i> <i>Systems Evaluation</i>	<i>Manual Dexterity</i> <i>Finger Dexterity</i>
E4	CORE	Maintain Direct Current (DC) motors	<i>Operation and Control</i> <i>Systems Evaluation</i>	<i>Manual Dexterity</i> <i>Finger Dexterity</i>
E4	CORE	Maintain Motor Generator (MG) sets	<i>Operation and Control</i> <i>Systems Evaluation</i>	<i>Manual Dexterity</i> <i>Finger Dexterity</i>
E4	CORE	Maintain Ships Service Generator (SSG) electrical components	<i>Operation and Control</i> <i>Systems Evaluation</i>	<i>Manual Dexterity</i> <i>Finger Dexterity</i>
E4	CORE	Maintain static converter components	<i>Operation and Control</i> <i>Systems Evaluation</i>	<i>Manual Dexterity</i> <i>Finger Dexterity</i>
E5	CORE	Maintain static inverter components	<i>Operation and Control</i> <i>Systems Evaluation</i>	<i>Manual Dexterity</i> <i>Finger Dexterity</i>

POWER DISTRIBUTION

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>	<u>Skills</u>	<u>Abilities</u>
E4	CORE	Clean casualty power system components	<i>Equipment Maintenance</i> <i>Equipment Selection</i>	<i>Manual Dexterity</i> <i>Problem Sensitivity</i>
E4	CORE	Inspect casualty power system components	<i>Operation Monitoring</i> <i>Quality Control Analysis</i>	<i>Problem Sensitivity</i> <i>Memorization</i>
E4	CORE	Maintain Arc Fault Detector (AFD) system components	<i>Operation and Control</i> <i>Systems Evaluation</i>	<i>Manual Dexterity</i> <i>Finger Dexterity</i>
E4	CORE	Maintain Automatic Bus Transfer (ABT) components	<i>Operation and Control</i> <i>Systems Evaluation</i>	<i>Manual Dexterity</i> <i>Finger Dexterity</i>
E4	CORE	Maintain circuit breakers	<i>Operation and Control</i> <i>Systems Evaluation</i>	<i>Manual Dexterity</i> <i>Finger Dexterity</i>
E4	CORE	Maintain electrical connections	<i>Operation and Control</i> <i>Systems Evaluation</i>	<i>Manual Dexterity</i> <i>Finger Dexterity</i>
E4	CORE	Maintain electrical distribution switchboard components	<i>Operation and Control</i> <i>Systems Evaluation</i>	<i>Manual Dexterity</i> <i>Finger Dexterity</i>
E4	CORE	Maintain electrical power monitoring systems	<i>Operation and Control</i> <i>Systems Evaluation</i>	<i>Manual Dexterity</i> <i>Finger Dexterity</i>
E4	CORE	Maintain grounding straps	<i>Operation and Control</i> <i>Systems Evaluation</i>	<i>Manual Dexterity</i> <i>Finger Dexterity</i>
E4	CORE	Maintain magnetic controllers	<i>Operation and Control</i> <i>Systems Evaluation</i>	<i>Manual Dexterity</i> <i>Finger Dexterity</i>

E4	CORE	Maintain Manual Bus Transfer (MBT) components <i>Operation and Control</i> <i>Systems Evaluation</i>	<i>Manual Dexterity</i> <i>Finger Dexterity</i>
E4	CORE	Maintain shore power cable components <i>Operation and Control</i> <i>Systems Evaluation</i>	<i>Manual Dexterity</i> <i>Finger Dexterity</i>
E4	CORE	Maintain storage batteries <i>Operation and Control</i> <i>Systems Evaluation</i>	<i>Manual Dexterity</i> <i>Finger Dexterity</i>
E4	CORE	Operate electrical distribution switchboard components <i>Operation and Control</i> <i>Operation Monitoring</i>	<i>Manual Dexterity</i> <i>Finger Dexterity</i>
E4	CORE	Operate power distribution system components <i>Operation and Control</i> <i>Operation Monitoring</i>	<i>Manual Dexterity</i> <i>Finger Dexterity</i>
E4	CORE	Perform shore power cable operations <i>Operation and Control</i> <i>Systems Evaluation</i>	<i>Manual Dexterity</i> <i>Finger Dexterity</i>

SMALL CRAFT

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>	<u>Skills</u>	<u>Abilities</u>
E4	CORE	Maintain small craft electrical system components <i>Operation and Control</i> <i>Systems Evaluation</i>		<i>Manual Dexterity</i> <i>Finger Dexterity</i>
E4	CORE	Repair small craft electrical system components <i>Management of Material Resources</i> <i>Repairing</i>		<i>Multi-limb Coordination</i> <i>Manual Dexterity</i>
E4	CORE	Troubleshoot small craft electrical system components <i>Systems Evaluation</i> <i>Troubleshooting</i>		<i>Multi-limb Coordination</i> <i>Inductive Reasoning</i>

TECHNICAL ADMINISTRATION

E6	CORE	Maintain administrative programs <i>Learning Strategies</i> <i>Monitoring</i>		<i>Deductive Reasoning</i> <i>Written Comprehension</i>
E6	CORE	Review administrative programs <i>Monitoring</i> <i>Reading Comprehension</i>		<i>Inductive Reasoning</i> <i>Deductive Reasoning</i>
E6	CORE	Update administrative programs <i>Monitoring</i> <i>Writing</i>		<i>Written Comprehension</i> <i>Deductive Reasoning</i>

Job Title**Electrical Systems Technician****Job Code****003302****Job Family**

Installation, Maintenance, and Repair

NOC

4900-2094.00

Short Title (30 Characters)

ELECTRICAL SYSTEMS TECHNICIAN

Short Title (10 Characters)

E SYS TEC

Pay Plan

Enlisted

Career Field

EM

Proficiency Level

J/M

Other Relationships and Rules:

Not applicable, based upon the NEC assigned to the job (if any).

Job Description

Electrical Systems Technicians are responsible for the installation, operation, adjustment, routine maintenance, inspection, testing and repair of a ship's electrical power generation systems, lighting systems, electrical equipment, electrical appliances, and interpreting the electrical sketches, diagrams, and blueprints associated with those systems. They maintain operating efficiency of distribution panels, switches, switchboards, controllers, voltage regulators, current transformers, voltage transformers, and electric motors. They inspect, maintain, test, and repair electrical power equipment and related electronic equipment, install and maintain storage batteries, install power and lighting circuits, connect electric power machinery and electric power equipment, repair distribution circuits, and run wiring for lights and other equipment. They perform maintenance and repair of electrical equipment and appliances, shipboard elevator systems, and various propulsion and auxiliary control consoles, test for short circuits and grounds, and rebuild electrical equipment. These technicians are expected to perform work independently and mentor Electrical Systems Maintainers with limited supervision.

DoD Relationship**Title and Group:**

Electric Power

166

Code and Area:

166200

16

O*NET Relationship**Title and SOC Code:**

Electrical and Electronics Repairers,
Commercial and Industrial Equipment
49-2094.00

Name and Family Code:

Installation, Maintenance, and
Repair
49

AUXILIARY ELECTRICAL EQUIPMENT**Paygrade**

E5

Task Type

CORE

Task Statements

Maintain fire protection system electrical components

*Operation and Control**Systems Evaluation***Abilities***Manual Dexterity**Finger Dexterity*

E5

CORE

Maintain generator governor system electrical components

*Operation and Control**Systems Evaluation**Manual Dexterity**Finger Dexterity*

E5

CORE

Repair battery support systems

*Management of Material Resources**Repairing**Multi-limb Coordination**Manual Dexterity*

E5

CORE

Repair boiler electrical components

*Management of Material Resources**Repairing**Multi-limb Coordination**Manual Dexterity*

E5

CORE

Repair Collection, Holding, and Transfer (CHT) system electrical components

*Management of Material Resources**Repairing**Multi-limb Coordination**Manual Dexterity*

E5

CORE

Repair degaussing system components

*Management of Material Resources**Repairing**Multi-limb Coordination**Manual Dexterity*

E5

CORE

Repair dehydrator electrical components

*Management of Material Resources**Repairing**Multi-limb Coordination**Manual Dexterity*

E5

CORE

Repair electrically-operated valve components

*Management of Material Resources**Repairing**Multi-limb Coordination**Manual Dexterity*

E5

CORE

Repair fire protection system electrical components

*Management of Material Resources**Repairing**Multi-limb Coordination**Manual Dexterity*

E5

CORE

Repair generator governor system electrical components

*Management of Material Resources**Repairing**Multi-limb Coordination**Manual Dexterity*

E5	CORE	Repair precipitator components	<i>Management of Material Resources</i>	<i>Multi-limb Coordination</i>
			<i>Repairing</i>	<i>Manual Dexterity</i>
E5	CORE	Repair salinity indicating system components	<i>Management of Material Resources</i>	<i>Multi-limb Coordination</i>
			<i>Repairing</i>	<i>Manual Dexterity</i>
E4	CORE	Repair sensing and control electrical devices	<i>Management of Material Resources</i>	<i>Multi-limb Coordination</i>
			<i>Repairing</i>	<i>Manual Dexterity</i>
E5	CORE	Repair shaft speed sensing, indication, and Engine Order Telegraph (EOT) components	<i>Management of Material Resources</i>	<i>Multi-limb Coordination</i>
			<i>Repairing</i>	<i>Manual Dexterity</i>
E5	CORE	Repair ships steering control system electrical components	<i>Management of Material Resources</i>	<i>Multi-limb Coordination</i>
			<i>Repairing</i>	<i>Manual Dexterity</i>
E5	CORE	Repair ultrasonic cleaner components	<i>Management of Material Resources</i>	<i>Multi-limb Coordination</i>
			<i>Repairing</i>	<i>Manual Dexterity</i>
E4	CORE	Repair welding equipment electrical components	<i>Management of Material Resources</i>	<i>Multi-limb Coordination</i>
			<i>Repairing</i>	<i>Manual Dexterity</i>
E5	CORE	Troubleshoot battery support systems	<i>Systems Evaluation</i>	<i>Multi-limb Coordination</i>
			<i>Troubleshooting</i>	<i>Inductive Reasoning</i>
E5	CORE	Troubleshoot boiler electrical components	<i>Systems Evaluation</i>	<i>Multi-limb Coordination</i>
			<i>Troubleshooting</i>	<i>Inductive Reasoning</i>
E4	CORE	Troubleshoot Collection, Holding, and Transfer (CHT) system electrical components	<i>Systems Evaluation</i>	<i>Multi-limb Coordination</i>
			<i>Troubleshooting</i>	<i>Inductive Reasoning</i>
E5	CORE	Troubleshoot degaussing system components	<i>Systems Evaluation</i>	<i>Multi-limb Coordination</i>
			<i>Troubleshooting</i>	<i>Inductive Reasoning</i>
E5	CORE	Troubleshoot dehydrator electrical components	<i>Systems Evaluation</i>	<i>Multi-limb Coordination</i>
			<i>Troubleshooting</i>	<i>Inductive Reasoning</i>
E5	CORE	Troubleshoot electrically-operated valve components	<i>Systems Evaluation</i>	<i>Multi-limb Coordination</i>
			<i>Troubleshooting</i>	<i>Inductive Reasoning</i>
E5	CORE	Troubleshoot fire protection system electrical components	<i>Systems Evaluation</i>	<i>Multi-limb Coordination</i>
			<i>Troubleshooting</i>	<i>Inductive Reasoning</i>
E5	CORE	Troubleshoot generator governor system electrical components	<i>Systems Evaluation</i>	<i>Multi-limb Coordination</i>
			<i>Troubleshooting</i>	<i>Inductive Reasoning</i>
E5	CORE	Troubleshoot precipitator components	<i>Systems Evaluation</i>	<i>Multi-limb Coordination</i>
			<i>Troubleshooting</i>	<i>Inductive Reasoning</i>
E5	CORE	Troubleshoot salinity indicating system components	<i>Systems Evaluation</i>	<i>Multi-limb Coordination</i>
			<i>Troubleshooting</i>	<i>Inductive Reasoning</i>
E5	CORE	Troubleshoot sensing and control electrical devices	<i>Systems Evaluation</i>	<i>Multi-limb Coordination</i>
			<i>Troubleshooting</i>	<i>Inductive Reasoning</i>
E5	CORE	Troubleshoot shaft speed sensing, indication, and Engine Order Telegraph (EOT) components	<i>Systems Evaluation</i>	<i>Multi-limb Coordination</i>
			<i>Troubleshooting</i>	<i>Inductive Reasoning</i>

E5	CORE	Troubleshoot ships steering control system electrical components	<i>Systems Evaluation</i> <i>Troubleshooting</i>	<i>Multi-limb Coordination</i> <i>Inductive Reasoning</i>
E5	CORE	Troubleshoot ultrasonic cleaner components	<i>Systems Evaluation</i> <i>Troubleshooting</i>	<i>Multi-limb Coordination</i> <i>Inductive Reasoning</i>
E5	CORE	Troubleshoot welding equipment electrical components	<i>Systems Evaluation</i> <i>Troubleshooting</i>	<i>Multi-limb Coordination</i> <i>Inductive Reasoning</i>

ELECTRICAL INSTALLATIONS

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>	<u>Skills</u>	<u>Abilities</u>
E4	CORE	Install permanent cables	<i>Installation</i> <i>Repairing</i>	<i>Manual Dexterity</i> <i>Finger Dexterity</i>
E5	CORE	Interpret working drawings	<i>Complex Problem Solving</i> <i>Critical Thinking</i>	<i>Written Expression</i> <i>Written Comprehension</i>
E4	CORE	Repair damaged electrical equipment	<i>Management of Material Resources</i> <i>Repairing</i>	<i>Multi-limb Coordination</i> <i>Manual Dexterity</i>
E4	CORE	Repair deranged electrical equipment	<i>Management of Material Resources</i> <i>Repairing</i>	<i>Multi-limb Coordination</i> <i>Manual Dexterity</i>

ELEVATORS AND CONVEYORS

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>	<u>Skills</u>	<u>Abilities</u>
E4	CORE	Repair conveyor electrical components	<i>Management of Material Resources</i> <i>Repairing</i>	<i>Multi-limb Coordination</i> <i>Manual Dexterity</i>
E4	CORE	Repair elevator and dumbwaiter electrical components	<i>Management of Material Resources</i> <i>Repairing</i>	<i>Multi-limb Coordination</i> <i>Manual Dexterity</i>
E4	CORE	Troubleshoot conveyor electrical components	<i>Systems Evaluation</i> <i>Troubleshooting</i>	<i>Multi-limb Coordination</i> <i>Inductive Reasoning</i>
E4	CORE	Troubleshoot elevator and dumbwaiter electrical components	<i>Systems Evaluation</i> <i>Troubleshooting</i>	<i>Multi-limb Coordination</i> <i>Inductive Reasoning</i>

LIFTING EQUIPMENT

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>	<u>Skills</u>	<u>Abilities</u>
E4	CORE	Repair capstan electrical components	<i>Management of Material Resources</i> <i>Repairing</i>	<i>Multi-limb Coordination</i> <i>Manual Dexterity</i>
E5	CORE	Repair crane electrical components	<i>Management of Material Resources</i> <i>Repairing</i>	<i>Multi-limb Coordination</i> <i>Manual Dexterity</i>
E5	CORE	Repair electrical hoist electrical components	<i>Management of Material Resources</i> <i>Repairing</i>	<i>Multi-limb Coordination</i> <i>Manual Dexterity</i>
E4	CORE	Repair electrical winch components	<i>Management of Material Resources</i> <i>Repairing</i>	<i>Multi-limb Coordination</i> <i>Manual Dexterity</i>
E5	CORE	Repair windlass electrical components	<i>Management of Material Resources</i> <i>Repairing</i>	<i>Multi-limb Coordination</i> <i>Manual Dexterity</i>

E4	CORE	Troubleshoot capstan electrical components <i>Systems Evaluation</i> <i>Troubleshooting</i>	<i>Multi-limb Coordination</i> <i>Inductive Reasoning</i>
E5	CORE	Troubleshoot crane electrical components <i>Systems Evaluation</i> <i>Troubleshooting</i>	<i>Multi-limb Coordination</i> <i>Inductive Reasoning</i>
E5	CORE	Troubleshoot electrical hoist electrical components <i>Systems Evaluation</i> <i>Troubleshooting</i>	<i>Multi-limb Coordination</i> <i>Inductive Reasoning</i>
E4	CORE	Troubleshoot electrical winch components <i>Systems Evaluation</i> <i>Troubleshooting</i>	<i>Multi-limb Coordination</i> <i>Inductive Reasoning</i>
E5	CORE	Troubleshoot windlass electrical components <i>Systems Evaluation</i> <i>Troubleshooting</i>	<i>Multi-limb Coordination</i> <i>Inductive Reasoning</i>

LIGHTING SYSTEMS

<u>Pavgrade</u>	<u>Task Type</u>	<u>Task Statements</u>	<u>Skills</u>	<u>Abilities</u>
E4	CORE	Repair flight deck lighting system components	Management of Material Resources Repairing	Multi-limb Coordination Manual Dexterity
E4	CORE	Repair general lighting system components	Management of Material Resources Repairing	Multi-limb Coordination Manual Dexterity
E4	CORE	Repair navigation and signal lighting system components	Management of Material Resources Repairing	Multi-limb Coordination Manual Dexterity
E4	CORE	Troubleshoot flight deck lighting system components	Systems Evaluation Troubleshooting	Multi-limb Coordination Inductive Reasoning
E4	CORE	Troubleshoot general lighting system components	Systems Evaluation Troubleshooting	Multi-limb Coordination Inductive Reasoning
E4	CORE	Troubleshoot navigation and signal lighting system components	Systems Evaluation Troubleshooting	Multi-limb Coordination Inductive Reasoning

MOTORS AND GENERATORS

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>	<u>Skills</u>	<u>Abilities</u>
E5	CORE	Repair Direct Current (DC) generator components	Management of Material Resources Repairing	Multi-limb Coordination Manual Dexterity
E5	CORE	Repair Motor Generator (MG) sets	Management of Material Resources Repairing	Multi-limb Coordination Manual Dexterity
E5	CORE	Repair Ships Service Generator (SSG) electrical components	Management of Material Resources Repairing	Multi-limb Coordination Manual Dexterity
E5	CORE	Repair static converter components	Management of Material Resources Repairing	Multi-limb Coordination Manual Dexterity
E5	CORE	Repair static inverter components	Management of Material Resources Repairing	Multi-limb Coordination Manual Dexterity
E5	CORE	Troubleshoot Direct Current (DC) generator components	Systems Evaluation Troubleshooting	Multi-limb Coordination Inductive Reasoning

E5	CORE	Troubleshoot Motor Generator (MG) sets	<i>Systems Evaluation</i> <i>Troubleshooting</i>	<i>Multi-limb Coordination</i> <i>Inductive Reasoning</i>
E5	CORE	Troubleshoot Ships Service Generator (SSG) electrical components	<i>Systems Evaluation</i> <i>Troubleshooting</i>	<i>Multi-limb Coordination</i> <i>Inductive Reasoning</i>
E5	CORE	Troubleshoot static converter components	<i>Systems Evaluation</i> <i>Troubleshooting</i>	<i>Multi-limb Coordination</i> <i>Inductive Reasoning</i>
E5	CORE	Troubleshoot static inverter components	<i>Systems Evaluation</i> <i>Troubleshooting</i>	<i>Multi-limb Coordination</i> <i>Inductive Reasoning</i>

POWER DISTRIBUTION

<u>Pavgrade</u>	<u>Task Type</u>	<u>Task Statements</u>	<u>Skills</u>	<u>Abilities</u>
E5	CORE	Repair Arc Fault Detector (AFD) system components	<i>Management of Material Resources</i> <i>Repairing</i>	<i>Multi-limb Coordination</i> <i>Manual Dexterity</i>
E5	CORE	Repair electrical distribution switchboard components	<i>Management of Material Resources</i> <i>Repairing</i>	<i>Multi-limb Coordination</i> <i>Manual Dexterity</i>
E5	CORE	Repair power distribution system components	<i>Management of Material Resources</i> <i>Repairing</i>	<i>Multi-limb Coordination</i> <i>Manual Dexterity</i>
E5	CORE	Test casualty power system components	<i>Operation Monitoring</i> <i>Quality Control Analysis</i>	<i>Extent Flexibility</i> <i>Multi-limb Coordination</i>
E5	CORE	Test electrical distribution switchboard components	<i>Operation Monitoring</i> <i>Quality Control Analysis</i>	<i>Extent Flexibility</i> <i>Multi-limb Coordination</i>
E5	CORE	Troubleshoot Arc Fault Detector (AFD) system components	<i>Systems Evaluation</i> <i>Troubleshooting</i>	<i>Multi-limb Coordination</i> <i>Inductive Reasoning</i>
E5	CORE	Troubleshoot electrical distribution switchboard components	<i>Systems Evaluation</i> <i>Troubleshooting</i>	<i>Multi-limb Coordination</i> <i>Inductive Reasoning</i>
E5	CORE	Troubleshoot power distribution system components	<i>Systems Evaluation</i> <i>Troubleshooting</i>	<i>Multi-limb Coordination</i> <i>Inductive Reasoning</i>

SMALL CRAFT

<u>Pavgrade</u>	<u>Task Type</u>	<u>Task Statements</u>	<u>Skills</u>	<u>Abilities</u>
E4	CORE	Maintain small craft electrical system components	<i>Operation and Control</i> <i>Systems Evaluation</i>	<i>Manual Dexterity</i> <i>Finger Dexterity</i>
E4	CORE	Repair small craft electrical system components	<i>Management of Material Resources</i> <i>Repairing</i>	<i>Multi-limb Coordination</i> <i>Manual Dexterity</i>
E4	CORE	Troubleshoot small craft electrical system components	<i>Systems Evaluation</i> <i>Troubleshooting</i>	<i>Multi-limb Coordination</i> <i>Inductive Reasoning</i>

TECHNICAL ADMINISTRATION

<u>Pavgrade</u>	<u>Task Type</u>	<u>Task Statements</u>	<u>Skills</u>	<u>Abilities</u>
E6	CORE	Approve Quality Assurance (QA) repair forms	<i>Equipment Selection</i> <i>Management of Material Resources</i>	<i>Written Comprehension</i> <i>Deductive Reasoning</i>

E6	CORE	Maintain administrative programs	<i>Learning Strategies</i>	<i>Deductive Reasoning</i>
			<i>Monitoring</i>	<i>Written Comprehension</i>
E5	CORE	Prepare Quality Assurance (QA) repair forms	<i>Equipment Selection</i>	<i>Written Comprehension</i>
			<i>Management of Material Resources</i>	<i>Written Expression</i>
E6	CORE	Review administrative programs	<i>Monitoring</i>	<i>Inductive Reasoning</i>
			<i>Reading Comprehension</i>	<i>Deductive Reasoning</i>
E5	CORE	Review Quality Assurance (QA) repair forms	<i>Monitoring</i>	<i>Inductive Reasoning</i>
			<i>Reading Comprehension</i>	<i>Deductive Reasoning</i>
E6	CORE	Update administrative programs	<i>Monitoring</i>	<i>Written Comprehension</i>
			<i>Writing</i>	<i>Deductive Reasoning</i>
E5	CORE	Update Quality Assurance (QA) repair forms	<i>Monitoring</i>	<i>Written Comprehension</i>
			<i>Writing</i>	<i>Deductive Reasoning</i>